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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,361	04/28/2000	GUIDO MORUZZI	027650-857	5394

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EXAMINER

CHORBAJI, MONZER R

ART UNIT	PAPER NUMBER
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1744

8

DATE MAILED: 01/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/530,361

Applicant(s)

MORUZZI, GUIDO

Examiner

MONZER R CHORBAJI

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

This final office action is in response to the response received on 11/13/2002

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-3, 9-13, and 17-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Swank et al (U.S.P.N. 6,039,922).

With respect to claims 1 and 11, Swank discloses a method (col.1, lines 15-18) and an apparatus for applying (figure 1, 30) hydrogen peroxide to a packaging sheet material (col.8, lines 115-16) then removing most of the hydrogen peroxide (figure 1, 36) from the surface of the packaging material while retaining a residual trace (col.2, lines 48-49) then irradiating the material with UV wavelength (figure 1, 38) between 200 nm and 320 nm (col.7, line 1). In addition, the web material inherently contains

microorganisms on the surface. Since Swank method leaves a residual trace of hydrogen peroxide then it inherently accomplishes what is claimed in claims 1 and 11 with regard to the hydrogen peroxide being absorbed by or located adjacent to any microorganisms on the surface of the web material.

With respect to claims 2-3, and 12-13; Swank teaches that liquid hydrogen peroxide is known to be applied (col.1, lines 45 and 48-48) with concentration of up to 50% by weight (col.32, lines 3-6) such that this range inherently includes 20% to 40% by weight.

With respect to claims 9-10, Swank discloses that the material is a web (col.8, lines 15-16), and the material is a blank (col.6, lines 27-28).

With respect to claims 17-18, Swank teaches the following: UV includes a monochromatic excimer lamp (col.15, lines 63-65 and col.7, line 1) source having a wavelength of 222 nm.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 4-5, 7-8, 14, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swank et al (U.S.P.N. 6,039,922).

With respect to claims 4-5, 7-8, and 14, Swank discloses that it is known to use liquid hydrogen peroxide that would intrinsically includes immersing the sheet material in the hydrogen peroxide (col.1, lines 45 and 48-49). With respect to time and temperature, Swank discloses a temperature of 175 degree Celsius but does not explicitly disclose of specific time interval. However, such parameters are results of experimentation that are within the scope of a person having ordinary skill in the art. The same applies to claim 5, where Swank discloses the use of heated air applied over a time interval without explicitly providing the temperature of the air (col2, line 45-49). The limitations of claims 7-78 were discussed above.

With respect to claim 16, Swank's apparatus uses hot air applicators (figure 1, 36 and 40) without providing the specific type of the applicators. However, the choice of such applicators is within the scope of the artisan.

7. Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swank et al (U.S.P.N. 6,039,922) in view of Sizer et al (U.S.P.N. 5,843,374).

The teachings of Swank have previously been set forth with regard to claims 1-5, 7-14, and 16-18. With regard to claims 6 and 19, Swank fails to disclose such a

limitation. However, Sizer discloses the use of polychromatic UV light (col.2, lines 37-44 and col.10, lines 17-21). As a result, one having ordinary skill in the art of sterilizing web material would have been motivated to utilize the teachings of Sizer to Swank in order to design an apparatus capable of using both types of UV light.

8. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Swank et al (U.S.P.N. 6,039,922) in view of Lothman et al (U.S.P.N. 4,225,556).

The teachings of Swank have previously been set forth with regard to claims 1-5, 7-14, and 16-18. With regard to claim 15, Swank fails to disclose such a limitation. However, Lothman discloses a bath that intrinsically defines a liquid column with a certain height (figure 1, 16). However, such a height is due to experimentation and is within the scope of the artisan.

Response to Arguments

9. Applicant's arguments filed 11/13/2002 have been fully considered but they are not persuasive.

On pages 3-4 of the response, applicant argues, "Swank patent does not disclose the operations of first applying hydrogen peroxide to a packaging, removing hydrogen peroxide from the surface of the packaging material and then irradiating the packaging sheet material upon removal of hydrogen peroxide from the packaging sheet material".

Swank does teach of applying hydrogen peroxide to a packaging (figure 1, 30), removing hydrogen peroxide from the surface of the packaging material (figure 1, 36) and then irradiating the packaging sheet material (figure 1, 38).

On page 4 of the response, applicant argues, "Swank does not disclose removing hydrogen peroxide from the packaging sheet material and leaving a residual trace of hydrogen peroxide prior to irradiating the packaging sheet material".

Swank discloses hydrogen peroxide removal step prior to irradiating sheet material (figure 1, 36) such that the hot air is inherently capable of removing portion of hydrogen peroxide and leaving a residual trace of hydrogen peroxide since Swank emphasizes the importance of the interaction between UV and hydrogen peroxide (col.4, lines 61-66) when the sheet material enters the UV chamber (figure 1, 38).

On page 4 of the response, applicant argues, "Swank does not disclose directly targeting residual or trace amount of hydrogen peroxide on microorganisms present on the packaging sheet with UV radiation".

The claims are silent with respect to the phrase "directly targeting". As explained above Swank does retain a residual hydrogen peroxide quantity prior to UV sterilization since such a residual is needed for the synergetic sterilization effect between UV and hydrogen peroxide (col.4, lines 61-66). As a result, a trace quantity of hydrogen peroxide covers microorganisms inherently present on the surfaces of the packaging sheets. Furthermore, since the surfaces of packaging sheets inherently include microorganisms that is why the goal of Swank is to sterilize such surfaces.

On page 4 of the response, applicant recites Swank reference as follows: "As previously discussed, Swank discloses applying hydrogen peroxide vapor with a hydrogen peroxide applicator 30 and then drying the hydrogen peroxide prior to the container entering into the UV chamber 38".

The applicant admits that Swank does apply a hydrogen peroxide removal step prior to the container entering into the UV chamber. This step involves the use of heated air. In the specification, pages 9-10, applicant also uses heated air as Swank does. Thus, the heated air used in Swank is inherently capable of retaining a residual quantity of hydrogen peroxide at any microorganisms on the surfaces of the packaging sheets prior to the application of UV.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R CHORBAJI whose telephone number is (703) 305-3605. The examiner can normally be reached on M-F 8:30-5:00.

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBERT J WARDEN can be reached on (703) 308-2920. The fax phone

numbers for the organization where this application or proceeding is assigned are (703) 305-3599 for regular communications and (703) 305-7719 for After Final communications.

13. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Monzer R. Chorbaji *MRC*
Patent Examiner
AU 1744
January 21, 2003

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